



# Monorail Review Panel

Integrating the Monorail through  
Design & Planning

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April 29, 2004

Council President Jan Drago  
Seattle City Council  
Seattle City Hall – 600 4<sup>th</sup> Avenue  
Seattle, WA 98124-4025

Re: **Monorail Review Panel Final Analysis and Recommendations Regarding  
the Proposed Monorail Alignment and Station Locations**

Dear Council President Drago and Councilmembers:

The Monorail Review Panel (MRP) is pleased to provide you with its recommendations to date on the Seattle Monorail Project's (SMP's) *Final Alignment and Station Locations* approved by the SMP Board on March 29, 2004. The recommendations in this letter are supplemental to those in the letter we sent to you on January 9, 2004 (attached). Since January we have devoted many additional hours to reviewing the alignment and station locations. We sincerely hope you will find this information useful and timely as you proceed with the alignment decision-making process.

As you know, the MRP was created to advise the City with an independent, peer-level professional review of the Monorail project on planning and urban design elements in compliance with the code required mandate of the Design Commission. Each Panel member takes this responsibility very seriously and has committed a significant amount of time to this effort. As stated by SMP in its system-wide urban design principles:

*The Monorail will serve the community for decades to come as a transportation system and significant regional landmark. It is essential that the system respond to and enhance the unique characteristics of the Seattle changing landscape and design form.*

Thus, we all share in the responsibility to assure that excellence in design and planning is achieved.

Over the past several months we have struggled to uphold our mission to the City, despite a very aggressive SMP project schedule. We are grateful to SMP, Metro and City staff for their considerable efforts and collaborations in preparing segment-based presentations that have made the Panel deliberations more efficient, focused and responsive. However, even with the improved presentations and our lengthening of regular meetings and scheduling additional ones, the Panel has not been able to finish this first major assignment. To date, we have completed an initial review of the entire alignment, but only nine of the proposed 20 stations, and we have not reviewed either of the bridges. The complexity and breadth of the information presented for each station area requires considerable study and deliberation at each meeting. We anticipate completing our reviews of the remaining stations and elements in June. **Consequently, we recommend that the Council refrain from making any final alignment decisions until we have an opportunity to complete the job for which we were created.**

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In January, the Panel stated that it “generally concurs with the (SMP) Preliminary Staff Recommendation regarding alignment...and 15 of the 20 proposed station locations (including Howe as a future station).” Since then, the Panel has concluded that we cannot support certain portions of the alignment and additional station locations. This change is due to further exploration of the issues as more information has become and continues to become available. While our primary concern is design, we are also troubled that system travel time on the Green Line may be as much as 25% greater than originally projected. Increased travel time is due to the single beam guideway (6 to 7 minutes), the sets of guideway turns in the alignment near South Lander Street, as well as the alignment turns proposed near the 35<sup>th</sup> Ave SW and SW Avalon Way station. Such an increase in travel time could threaten the viability of the system if the travel time and fare price is more than other transit options (the express bus from Crown Hill to 1<sup>st</sup> and Union takes 26 minutes). Lastly, the Panel is now responding specifically to the Board approved final alignment, rather than responding to multiple alternatives presented in the Preliminary Staff Recommendations and DEIS as we did in our January letter. **After additional review, the Panel now concurs with approximately half of the alignment and station locations reviewed to date.**

The Panel’s concerns with the alignment and station locations are summarized below.

**1. Project Schedule**

**It is not sustainable, reasonable, or productive to continue the project schedule at this pace.**

The Monorail project schedule is unprecedented among any other projects of a similar size, scope, and magnitude. Too much is at stake and at risk to proceed without the time necessary to perform due diligence in the review of the project. If the Panel, a body of volunteers formed to advise the City on design and planning issues associated with this project, cannot meet the project schedule despite great efforts to do so, then the question arises as to why and how alignment decisions could be made without similar due diligence by Council. Moreover, even with a continued overloaded schedule, the Panel has not yet completed its review of the Operations Center, arguably one of the most imposing elements of the entire route. The size and appearance of this structure has not been discussed, nor is it clear to the Panel that the proposed site location is appropriate. This incomplete level of review is the result of both the accelerated project schedule and the lack of project specifics. To press forward at this pace without the benefit of thorough analysis and deliberation is irresponsible and risks ultimately becoming the City’s burden.

***The Panel recommends that the Council establish reasonable time frames needed to make these critical decisions.***

**2. Design Detail**

**The lack of project detail is a source of frustration for the Panel and has hindered much of its deliberations.** The dearth of specifics in reviewing the project design is reliant on a presumption of trust that design excellence will occur. The Panel does not share SMP’s confidence that design excellence is assured. This is due in part to the large gaps in information known at this time, our concern that the DBOM process will “value-engineer” the architectural aesthetics out of the design, and the financial uncertainty of establishing a public transit system expected to break even. The City’s alignment agreements should not rely on trust; rather they are intended to establish contractual standards.

*The Panel recommends that the Council condition the Transit Way Agreement to retain the ability to review architectural design of both the stations and the guideway at a future point when the specific details are clearly stated.*

**3. Switches & System Infrastructure**

**The physical and visual impacts of switches present some of the most intractable urban design problems of the entire system.** On multiple occasions, the Panel has requested illustrations to fully understand what the switches will look like from the pedestrian vantage point. Because proprietary systems differ, the Panel has received general rather than specific descriptions of switches making conclusions regarding the full extent of their impact difficult to visualize or predict. Nevertheless, switches are large and obtrusive structures (varying in size that can be up to 180 feet long and 66 feet wide), which cover large areas of the public right of way and require a closer column spacing than the typical guideway. The problem inherent to these switches is that they are essentially solid roofs over the right-of-way and are likely to dominate public streets and sidewalks. Switches are likely to dominate the street scene and will cast significant shadows. The decision to use single-beam guideways for portions of the alignment is resulting in additional switches. The urban design implications of switches and other system infrastructure are of great concern to the Panel, especially in light of potential future expansion of the Monorail system.

*The Panel recommends that the Council recognize the impact of the switches on the public realm and consider preserving the option in the Transit Way Agreement to revisit the switch locations, configurations and design after the DBOM contractor is selected and more complete information becomes available.*

**4. Scale**

**This elevated system presents serious challenges to the pedestrian environment.** As proposed, the project includes roughly 14 miles of elevated concrete beams supported by over 700 concrete columns in the public right-of-way. The scale of the system structures, including the guideway, columns, switches and in some cases, the stations themselves, is disproportionately large relative to the human scale of the environments below. We are concerned that the pedestrian and bike experience, retail storefronts, wayfinding, landscaping and other public amenities not be compromised by the presence of the columns and overhead guideway and switches. A complete understanding of the impact on the pedestrian realm can only be reached when the size, spacing and height of the columns and beams is determined later in the design process. SMP's design work, however, is only at a preliminary level at this time.

*The Panel recommends that the Council condition the Transit Way Agreement to require additional information regarding the ground-level pedestrian experience as affected by the system structures, potentially during the DBOM selection process in order to ascertain the relative merits and impacts of each system on the pedestrian realm.*

**5. Seattle Center**

**The Panel believes both the Thomas and the Mercer Street alignments present compelling arguments worthy of further discussion, and recommends bringing the Thomas Street alignment back into review.** Although the Panel was unable to reach consensus on a single route, the Northwest route through the Seattle Center received the least support of all three alignment options discussed in detail. The issues raised at Seattle Center are clearly among the

most controversial of the entire route. The Panel's preferred route was Thomas Street, an option that has been "off the table" for some time. After carefully reviewing all of the information provided by SMP, stakeholders, and public, and walking the proposed alignments, the Panel believes the Thomas Street option warrants another look for the following compelling design and planning reasons:

1. The route respects more of the Seattle Center Master Plan than the Northwest route.
2. This route follows the street grid, which typically hosts transportation and circulation needs.
3. This is the shortest and cheapest proposed route – 500 feet less than the other routes.
4. This route does not compromise any open spaces or arterials. It is preferential to compromise a service corridor rather than a unique open space.
5. The route respects the edges of Seattle Center.
6. The route reserves the maximum circulation capacity on existing arterials.

The Panel's second choice was Mercer, followed by the Northwest route.

*The Panel recommends that the Council reconsider the merits of the Thomas Street alignment.*

#### **6. Operations Center**

**The necessity of several continuous switch mechanisms at the Operations Center suggests that the proposed location in Interbay may result in an inappropriate imposition on the public realm of this changing community.** The schedule has not provided enough time for the Panel to complete its initial review of the Operations Center alignment and location. Our first review of the Operations Center was last Monday and we expect to complete initial review next Monday, May 3<sup>rd</sup>. Based on our review to date, we can only provide preliminary observations. It is clear that given the large-scale industrial nature of the Operations Center, it should be located in an industrial zone. It is not clear, however, that Interbay is the best location. We have asked the SMP staff to provide additional information on this question, including why SODO should not be considered further as discussed in the EIS (FEIS Alternative C-2). The Interbay location is also problematic for other reasons: there is a large switching facility located over the street right-of-way covering an area approximately 36 feet by 540 feet over the sidewalk and west side of the street; the maintenance building has a potential height of 80 feet or more, exceeding the current zoning envelope by 35 feet; and impacting views from surrounding residential areas. This will be a massive structure and many MRP members believe that it will be extremely difficult to mitigate the effects of this large structure on 15th Ave NW. In addition, locating the Operations Center in SODO could possibly allow the southern segment to be constructed first thereby providing the City with an interim transit option when the SR-99 Viaduct is dismantled.

*The Panel recommends that the Council refrain from making a final decision on the location of the Operations Center until additional information is provided regarding the appropriateness of the Interbay location and the location of switches in the right-of-way.*

#### **7. Fifth & Virginia (Stewart) Station**

**No solid justification has been presented for how the proposed elevated skybridge will create a better intermodal downtown hub, nor is it clear that an intermodal designation is warranted.** Providing efficient and easy transfer movements amongst transit modes is important throughout the entire system and especially for all of the downtown stations. The elevated skybridge has been presented as a means to provide this ease of intermodal connection at the

Fifth and Virginia station. The Panel is not convinced that this location can or will function as an intermodal hub, and believes that the Second and Yesler and King/Weller stations would be better suited to meet certain inter-modal objectives. This station is likely to become a connection point to bus transit and a future SLU trolley, but is not the most efficient location for monorail/light rail/bus transfers. Further analysis of how an inter-modal hub would be realized at this location is necessary. Regardless, the Panel is skeptical that the proposed elevated walkway will achieve the intermodal connectivity necessary for a true intermodal hub. The Panel feels that the resources would be better spent on making the existing connection work. Improving the on-grade pedestrian realm around the Fifth and Virginia station (and other downtown stations) will greatly enhance multi-modal transfer and the pedestrian experience in general. The Panel agrees unequivocally that the streetscape between the station and Westlake must receive high quality design treatment regardless of whether other pedestrian connections (i.e., elevated walkway or tunnel) are provided. Improvements at this location would enhance the pedestrian experience for everyone and draw people to the retail core. This would also be more consistent with SMP's urban design goal of providing a vital and active pedestrian environment. For this same reason, the Panel also believes that the station area should be closer to the corner of Fifth and Stewart Street.

*The Panel recommends that the Council not approve the elevated pedestrian walkway between the station and Westlake Center and require premium streetscape improvements to the at-grade pedestrian connections to the retail core. The Panel also recommends that the Council require station access at the corner of Fifth and Stewart.*

**8. Second & Madison Station**

**The Panel is concerned about the viability of the proposed Second and Madison station location.** In the eventuality that the proposed site cannot be obtained, the capacity of the other two stations along Second Avenue would likely be challenged. Furthermore, the ridership for an entire section of the downtown business core ridership would be compromised.

*The Panel recommends that the Council secure confidence that this station site can be acquired or fully investigate an alternate location to capture the same ridership before making a final alignment decision.*

**9. Alignment Between 2<sup>nd</sup>/Yesler Station & King/Weller Stations**

**The proposed alignment threatens the historic integrity of the buildings and district through which it passes.** The proposed alignment negatively impacts both the Pioneer Square Historic District and King Street Station, both listed in the National Register of Historic Places. The alignment bisects the district and obscures views of the King Street Station tower, one of the city's most notable and recognizable historic structures. The Panel agrees that an alignment along Fourth Avenue offers a better urban design solution.

*The Panel recommends that the Council keep the City's options open in the Transit Way Agreement to allow WSDOT, SDOT and SMP to reach a resolution between the alignment alternatives. In either alignment scenario, extensive mitigation to preserve the historic integrity of this neighborhood should be required.*

#### **10. Delridge Alignment & Station**

**The success of this station depends on the resolution of the safety and intermodal issues at this harsh and difficult site.** While a majority of the Panel agree that SMP's proposed Delridge Station location and guideway alignment northwest of the Nucor plant appears to be the best option available, all members wish to stress that safety, parking supply, and intermodal connections at the Delridge station are of paramount concern.

*The Panel recommends that the Council provide heightened attention and commitment to pedestrian improvements at and around this station, and condition the Transit Way Agreement accordingly.*

#### **11. Avalon Alignment & Station**

**The 35th Ave SW alignment is gerrymandered and does not follow sound planning principles.** The proposed route introduces two 90-degree bends up a steep hill; will add 600 feet of track and seven columns to the monorail system; and will increase travel time by approximately 32 seconds without any substantial compensating benefits to the community. A station along Avalon would be highly visible and could serve as a significant landmark at the entrance to West Seattle. From the information presented, it does not appear that the traffic impacts to Fauntleroy would preclude an alignment down that street.

*The Panel recommends that the Council establish an alignment based on the alignment along Avalon to Fauntleroy with a station along Avalon.*

#### **12. Art Program**

**The Panel is concerned that the \$6 million art program budget will not be sufficient to include artistic expression at the stations and will be expected to correct design deficiencies.** The Panel is both encouraged and cautious about the SMP Public Art Program. Given the bulk, scale and urban design impacts, SMP should be commended for focusing the art program on the monorail guideway, columns, and switches. The artwork, however, should not take the place of excellent engineering and architectural design. These structures must first be given substantial and sincere engineering and architectural design effort prior to any participation by art program funding. The budget is too small to do otherwise. Secondly, we believe that artistic expression should occur both along the guideway and at the stations. Generous and deliberate integration of artistic expression into the public realm is a long-standing Seattle tradition. Focusing on the guideway should not preclude artwork in stations, stations areas, or pedestrian areas impacted by the monorail. Lastly, we have concerns about how the DBOM process will impact the ability to ensure meaningful art program participation in the engineering and architectural design process through construction of the guideway and stations.

*The Panel recommends that the Transit Way Agreement reinforce the role of public art in the project, both along the guideway and at stations and describe a clear role for the MRP in reviewing the integration of art into the project.*

#### **13. System Capacity & Future Expansion**

**Based on the information provided, the Panel remains unconvinced that the single-beam guideway is appropriate from a design perspective given continued concerns about the visual impacts related to additional switches, operations and future system capacity.** An increase in overall trip time, operational complexity and reliability, and potential reduction in

system capacity are significant concerns for a public transit system in which speed and reliability are key factors in attracting riders.

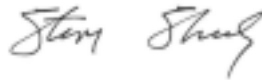
***The Panel recommends that the Council carefully consider the ability of the proposed system to meet current and future capacity.***

Thank you for the opportunity to share our recommendations with you. We view it as is our job to assist you and SMP in making the monorail successful both as a transportation system and as an agent of positive change in our City. The decisions you make now will impact our City for many decades to come and we urge you to allow adequate time and information so that the best possible system will be designed by SMP and built by its DBOM contractor. We would welcome the opportunity to brief you in person regarding our recommendations.

Sincerely,



Don Royse, Co-Chair  
Seattle Design Commission



Steve Sheehy, Co-Chair  
Seattle Planning Commission

Cc: Mayor Nickels  
Monorail Review Panel  
SMP Board Members  
Joel Horn

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Cheryl Sizov, DPD  
John Rahaim, DPD  
Marty Curry, DPD

Grace Crunican, SDOT  
Ethan Melone, SDOT  
David Spiker, SDC  
John Owen, SPC

*Attachment: MRP Letter dated January 9, 2004*